

User Manual

Activio Sport System 2010

Rev. 100804

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1 Installation guide for Activio Sport System

1.1 Program installation

Put the installation CD in the computer. The installation program is starting up automatically when you click on the file *Activio Sport System*. Just follow the instructions for installing the software.

.NET platform

If you don't have the right version of the software platform .NET installed on your computer, the installation program will ask you for that. Follow the instructions to install .NET, this is required for the Activio software. Just press continue when the installation program asks for that. The installation of .NET might take a few minutes to complete.

1.2 Upgrade from earlier version of Activio Sport Software

It's recommended to uninstall previous version of Activio Sport System. If the current version is 3.0.0.1 or later this will not delete any players or teams set up in earlier versions. If you upgrade from an earlier version than 3.x.x.x please contact Activio for instructions how to make a backup of player data before upgrade.

The uninstallation can be performed from the Control Panel and Remove Application option or from the Program menu (Start → Program → Activio Sport System) if there is an uninstallation option visible.

After uninstallation proceed with the normal installation before installing the HR Receiver.

1.3 Receiver installation

Attach the USB cable to the HR Receiver by gently insert the sealed Mini 'B' USB connector with the screw coupling, tighten the coupling ring neatly to not damage the sealing.

Insert the other USB standard 'A' connector in a USB port on the computer you want to use for this application. The HR Receivers' LED lamp should turn green.



Always use the same USB port when connecting the HR Receiver in the future, otherwise you need to follow this Step 1.3 for every USB port you would like to use.

Also connect the wire antenna to the HR Receiver to the golden antenna connector next to the green LED lamp, tighten it gently.

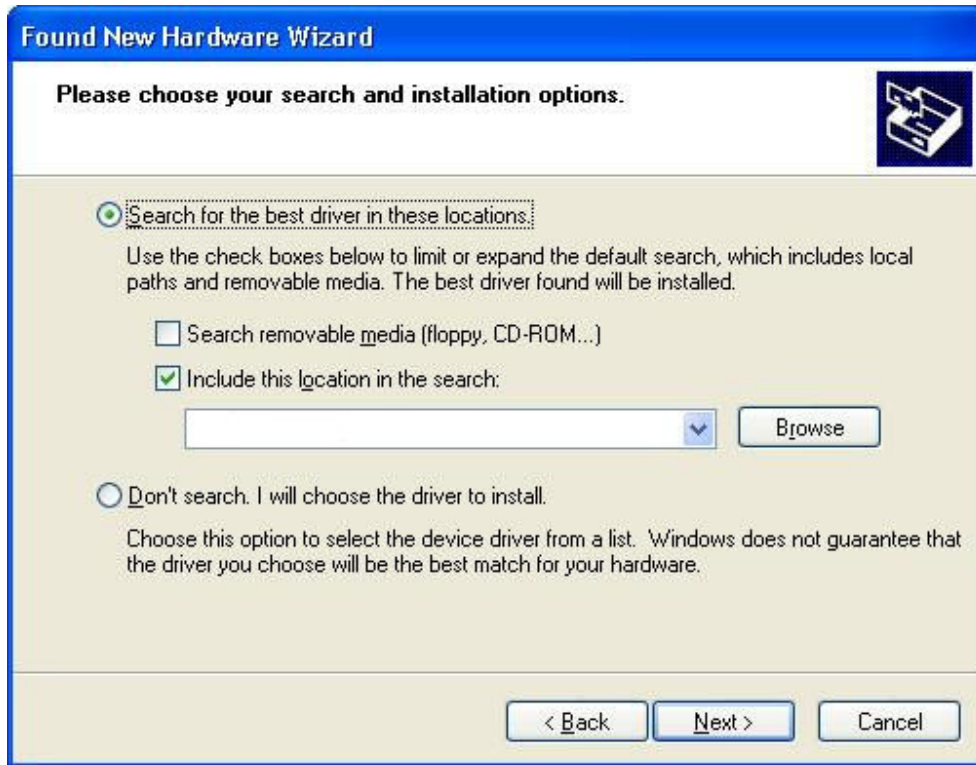
1.3.1 Windows XP

After inserting the HR Receiver the windows Found New Hardware wizard will launch. If the screen below is shown, select *No, not this time* from the options available and then click *Next* to proceed with the installation.



In the next screen you should select *Install from a list or a specific location (Advanced)* and click *Next*. Select *Search for the best driver in these locations* and select *Include this location in the search* and click *Browse* to locate the folder:

C:\Program\Activio\Activio Fitness Mobile\USB



If the application folder was altered by the user during the installation you need to look for the USB folder in the user-modified installation path.

The message dialogue shown on the right side will be displayed. Click on *Continue Anyway* to continue with the installation. If Windows XP is configured to ignore file signature warnings, no message will appear.

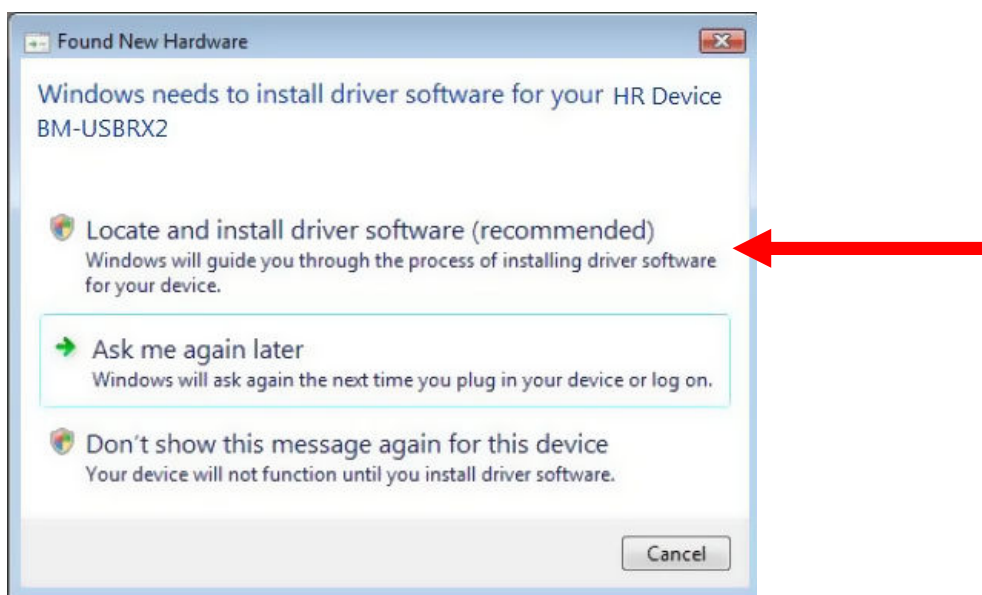


Windows copies the required drivers and then displays a message that the installation was successful. Click *Finish* to complete the installation.

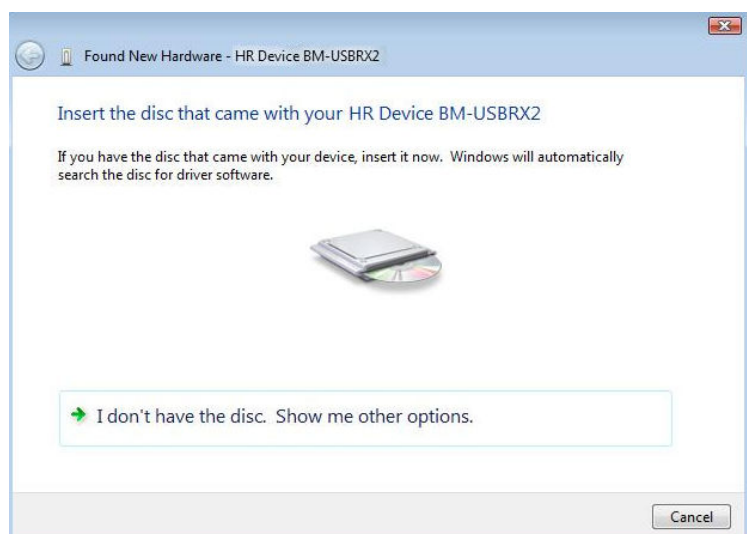
1.3.2 Windows Vista (Windows 7)

For Windows 7 see section 1.4 below how to manually launch the “Found New Hardware” box.

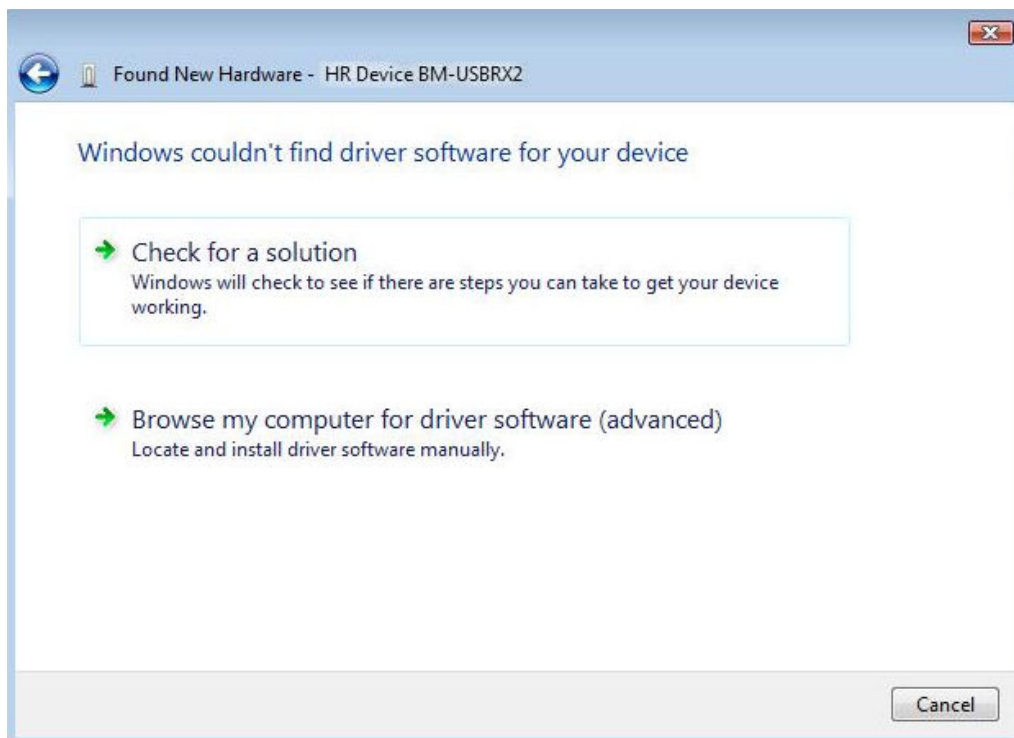
After inserting the HR Receiver the windows Found New Hardware wizard will launch. If there is no available Internet connection or Windows Vista is configured to ask before connecting to Windows Update, the screen below is shown. Select *Locate and install driver software (recommended)* from the options available to proceed with the installation.



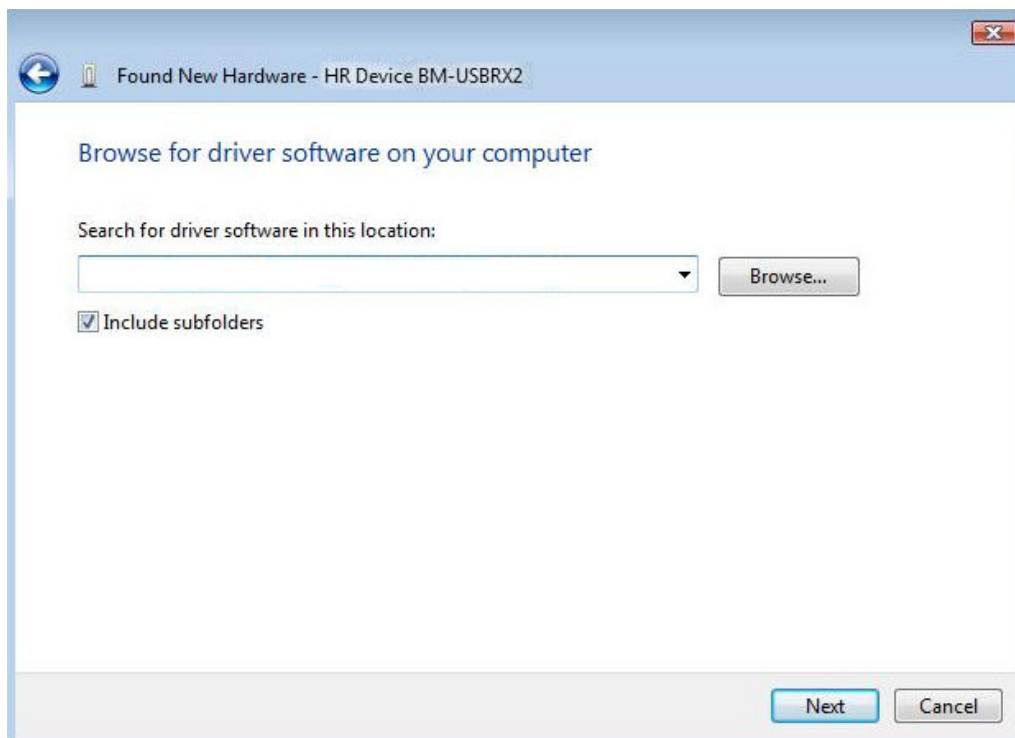
In the next screen you should select *I don't have the disk. Show me other options.* The next screen will appear.



The next screen shown below will appear:



You should select *Browse my computer for driver software (advanced)* and the next screen will appear:



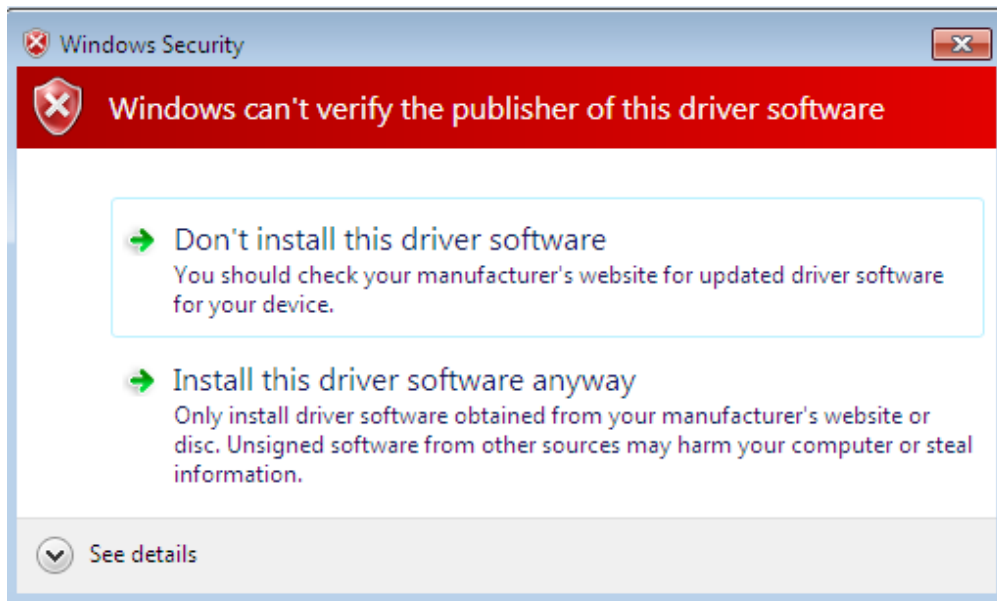
Click *Browse* to locate the folder:

C:\Program\Activio\Activio Fitness Mobile\USB

and then press “Next”

If the application folder was altered by the user during the installation you need to look for the USB folder in the user-modified installation path.

If you get the message dialogue shown below, click *Install this driver software anyway* to continue with the installation.



Windows now copies the required drivers and then displays a message that the installation was successful. Click *Close* to complete the installation.

1.4 Troubleshooting the HR Receiver installation

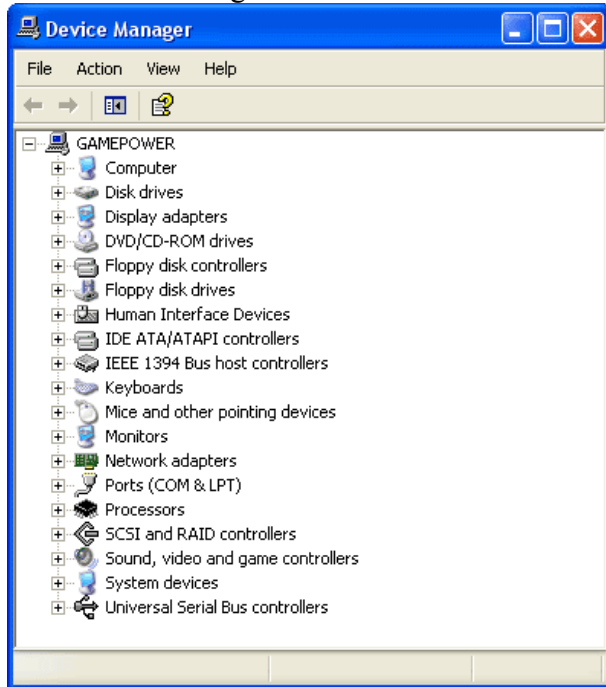
This applies to Windows 7 as the standard solution.

If the windows Found New Hardware wizard is **not** launched automatically, then you have to launch it manually in the *Device Manager* by following these steps:

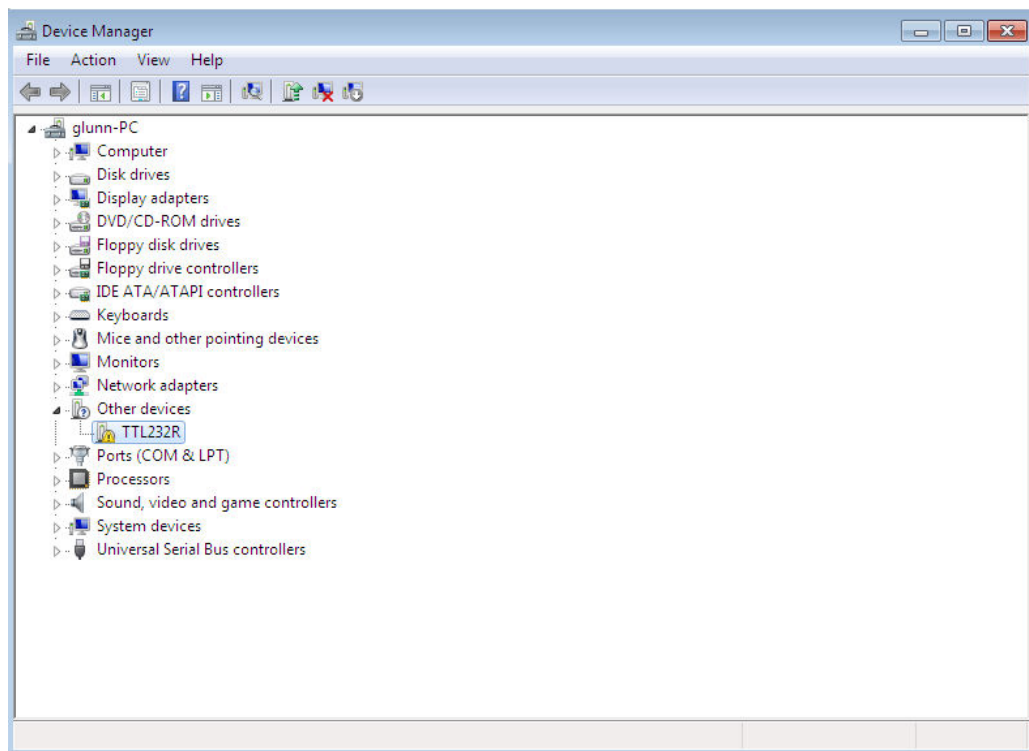
Click the Windows *Start* button and select *Control Panel* and then select *System* in the screen that displays. Select the *Hardware* tab and click the button *Device Manger*. In the next screen the device appears in the bottom section under Universal Serial Bus controllers as HR Device BM-USBRX2.

Select that device and under the menu item *Action* select *Update driver...* Now the windows Found New Hardware wizard launches. Follow the instructions above (1.3.1 Windows XP or 1.3.2 Windows Vista (Windows 7) to proceed with the installation normally.

The Device Manager in Windows XP



The Device Manager in Windows Vista and Windows 7



1.5 Start the Activio Sport Software

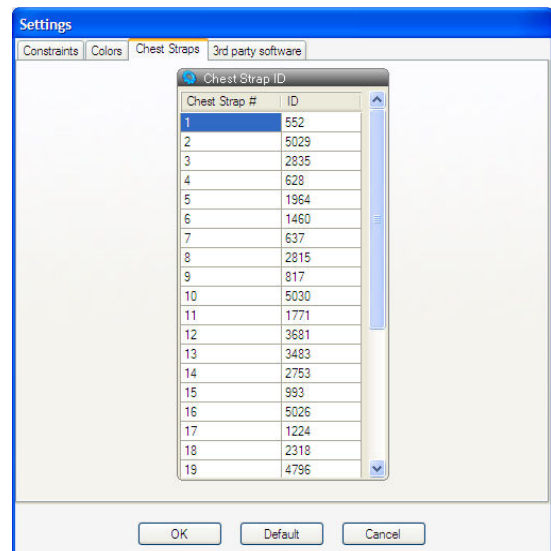
Insert the USB receiver to the USB port (the same as you used when you installed the receiver). The led/diode on the receiver should turn green. Double-click on the Activio icon found on the desktop or browse to the Activio folder (Start → Program → Activio) to launch the program. NOTE. You need to **use the same USB port/s** you installed in *Step 1.3*.

1.5.1 Insert chest belt ID

Before starting to use the system the first time the ID-numbers of the chest belt need to be setup in the software.

Go to **Tools / Settings / Chest straps**

Put in the ID-number on the right hand side in the list. Chest belt nr 1 should be at row nr 1 on the right hand side in the list. The ID number is presented on the back of the chest belts (don't include the first zeros in the ID number, ex. 1004444, not 001004444). Press **OK** when you are finished.



1.4.2 Connect and initialize the Receiver

Make sure the Receiver is physically connected to the computers USB port. In the menu select "Receiver" → "Connect" to connect to the receiver. The Red icon in the lower left corner will turn Yellow during the initialization. After 20-30 seconds the icon turn Green and the Receiver is ready for use.

1.4.3 Testing the belts

Now, go to *Players tab* in the menu. The icons before the players names should turn green when the belts are sending heart rate data (tip: it is easy to start the belts by rubbing one thumb on each of the two electrode parts on the back of the belt).

If an icon doesn't turn green, make sure the contact is good to the body. Also, it might be required to put some water on the electrodes to ensure a good connection.



2 User guide for Activio Sport System

Note: When the Activio Sport Software is running, the USB-receiver must always be attached to the USB port. If disconnected during collection, data will be lost during the time the receiver is disconnected.

2.1 Player and team manager

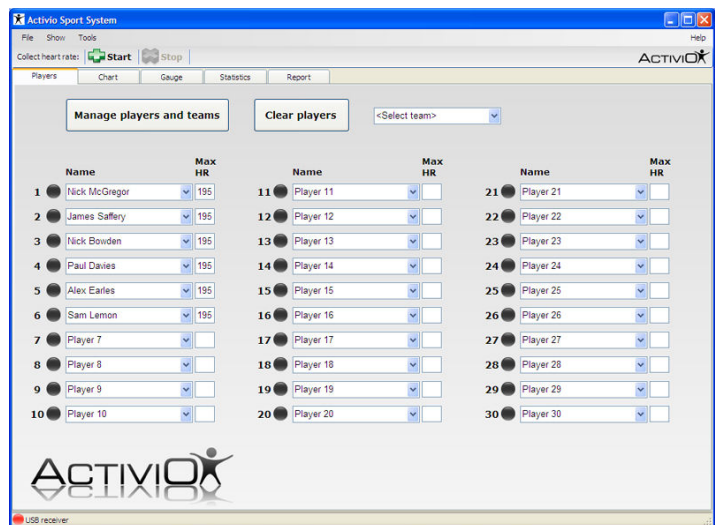
Before you start to use the system and collect HR data, make sure the players you want to monitor are all setup in the player list.

To insert new players go to *Player tab* in the menu and click on *Manage players and teams*, and then *New player*. When you have insert the players' individual information you press *Save*.

To create a team, click on *New Team* and put in the name of the team. End with *Save*.

To add players in a Team, just left click with the mouse on the player and hold down. Then move the player to the chosen team you have created.

The team players will appear in the order you inserted them to the team. The first player inserted to the team will be on place nr 1 in the list etc.



IMPORTANT! If you start the collection with no player inserted, you will not be able to save the data from the session.

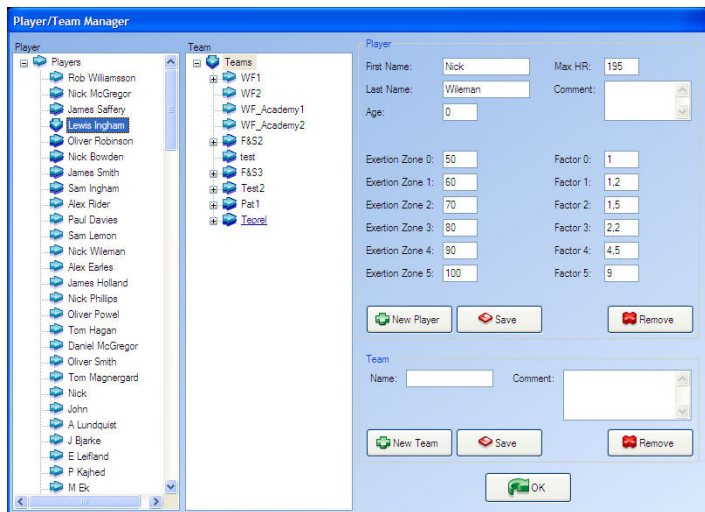
2.1.1 Exertion Count

The Exertion Count can be individually programmed for each player. The exertion zones corresponds to % of maximum heart rate and increases exponential similar to the production/accumulation of lactic acid with increased work load. The exertion factor for each zone can be individual adjusted. The values below are default.

For example, at 50% of maximum heart rate (MHR), you are given a value of 1 for each minute spent at 50%. At 60% of MHR you are given the value 1.2 for each minute spent at 60%, etc. Between each level the increase of the exertion factor is linier to the next level.

The default values for exertion count are:

100% = 9 points, 90% = 4,5 points
80% = 2,2 points, 70% = 1,5 points
60% = 1,2 points, 50% = 1 points



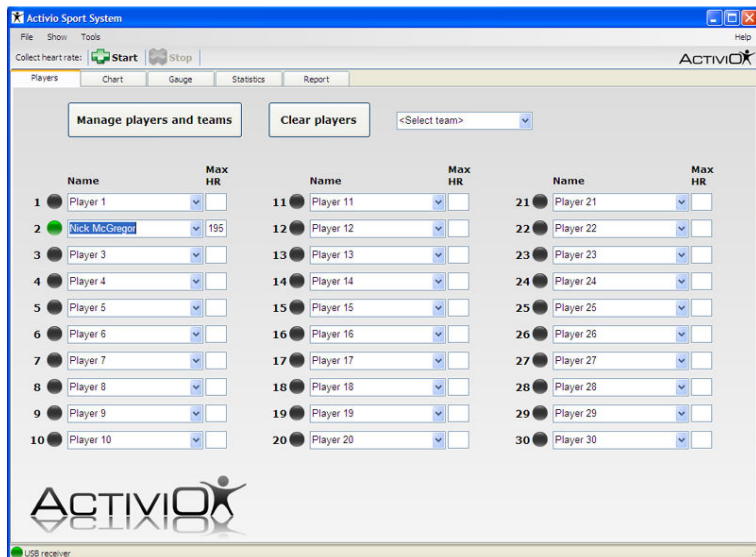
2.2 Data collection

Insert names of the players you are going to monitor. If you would like to monitor a team you can prepare a team in advance (see 2.1) and click on *Select team*.

To be able to collect heart rate data you need to click on *Start*. All data will now be displayed for the players you are monitoring.

To stop collecting press on *Stop*. You will then be asked if you would like to save the data.

Note: You need to have players with name insert before you press **Start** to be able to save the data from the session.



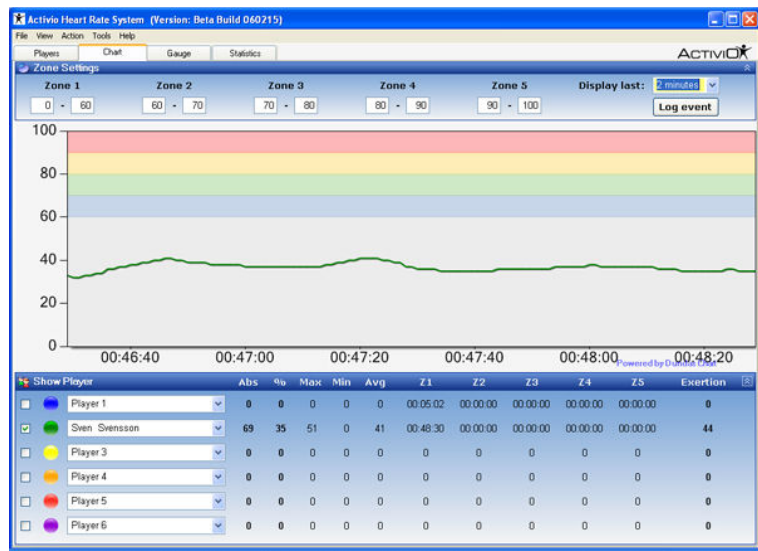
If the computer suddenly will turn off during data collection all data will be backed up and available when the software is launched again.

2.3 Chart view

Select the players you want to follow graphically. Maximum six individuals can be chosen at the same time.

If the player exceeds maximum transmission range data will not be captured by the system. The data will then remain the same as the previous value.

- Abs = Absolute/current HR
- % = percent of maximum HR
- Max = Max HR (%) you have reached during the session
- Avg = Average HR you have reached during the session
- Z1 = Zone 1 (default - 60%)
- Z2 = Zone 2 (default 60 - 70%)
- Z3 = Zone 3 (default 70 - 80%)
- Z4 = Zone 4 (default 80 - 90%)
- Z5 = Zone 5 (default 90 - 100%)
- Exertion = accumulated exertion count during the session



If the graph lines in this view get dashed you will be notified that the player is out of transmission range. The graph line will be normal again when the player is within transmission range.

2.3.1 Add comments

In the menu you will find *Add comment*. If you click on that and write a comment, that will be visual in the report section if you generate a *Curve*. The mark will be set from the time you pressed the button *Add comment*.

2.4 Statistics

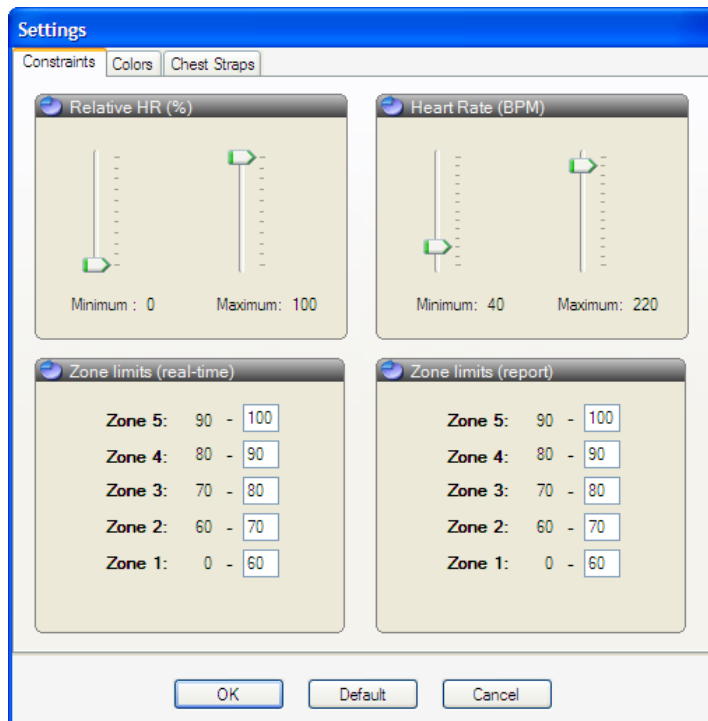
In this view you will be able to see all the players at the same time, with the same HR data as in the Chart view.

2.5 Tools

Settings: You are able to customize the zone settings, change the colors and change ID-number of the belts.

You can choose the zone limits you want to have for the real time graphical view and for the report function.

If you change the zone settings, you can choose to keep the new settings as default.



2.6 Report

2.6.1 Analyze

After the session you can analyze the data in *Report Tab*.

1 Select Player(s)

Select what you want to analyze and select player name.

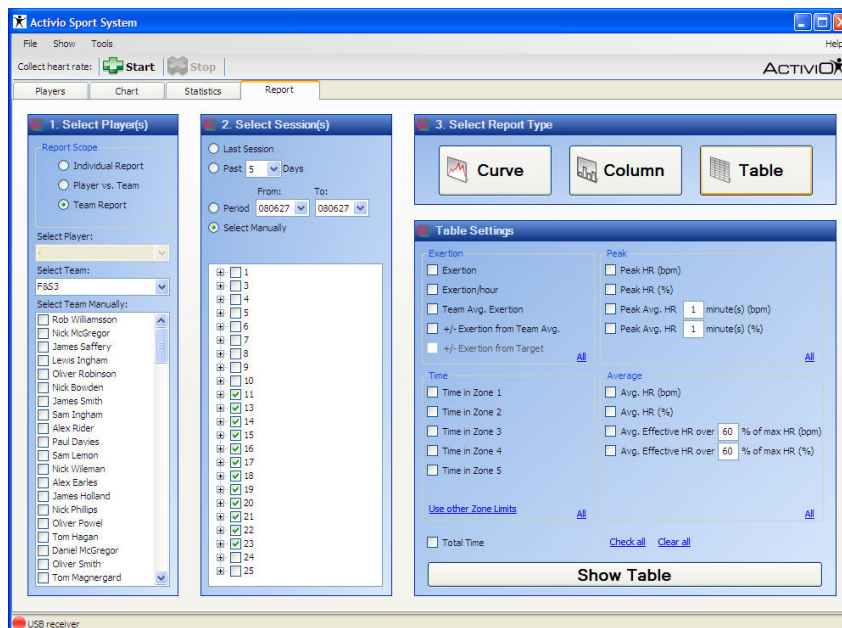
2 Select Session(s)

Select which period and session you want to analyze. Click on '+' at the players to see all sessions.

If you choose *Period* and want to analyse one specific day, you are able to select the specific training session if several sessions have been performed that day. Click on *Check* to get a list of the different sessions during that day.

3 Select Report Type

Select what form you want to analyze – as *Curve*, *Column* or *Table*. *Table* gives you a more detailed analyse for data during the entire session.



2.6.2 Curve

In this section you can analyze a session, or several sessions together in graphical form. You can choose to analyze specific parts of the curve (see picture below).

Selection of specific parts

Press down the left button at the start selection point. Then move the mouse to the right towards the end point. Move the mouse only in horizontal direction. If you go too much in vertical direction the area lines will turn blue and you enter the Zoom function. When you have arrived to the end point and the area lines are red, then drop the left mouse button. Now you are asked to Name that section. If you don't write anything it will then stand 'Selection 1'. If you press Save the area you selected will be gray. You are able to choose from other colors as well.

Report creation

When you have selected all parts you want to analyze, you choose what parameters you want to analyze up to the left. Finally you press PDF Report or Excel Report to create a report. To the report you can add a *Description* that will be printed on the report.

Save raw values

You will be able to save all HR data in a text file that can be imported into other programs.

Time over X %

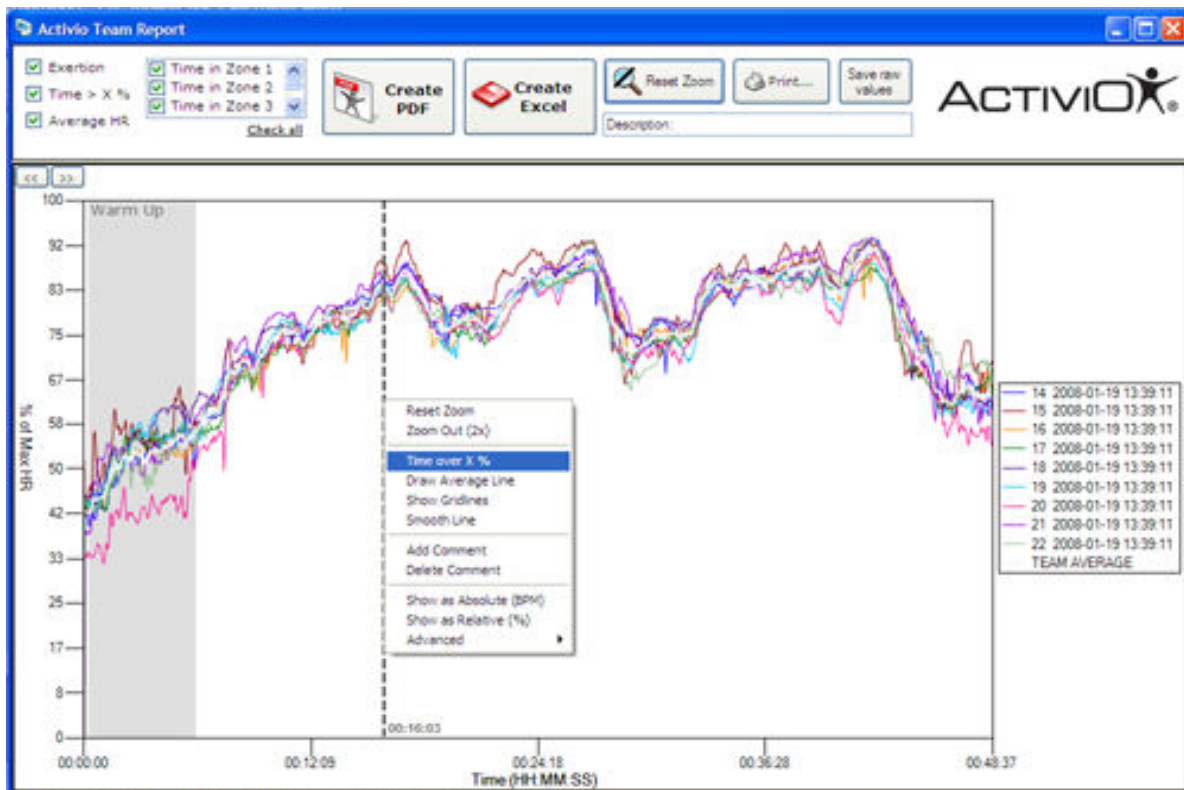
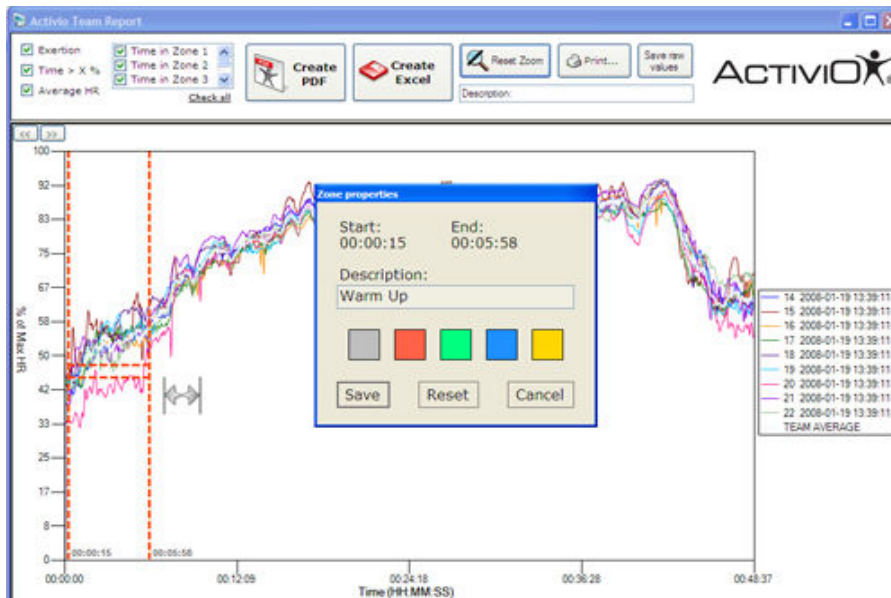
Right click in the graph and choose Time over X%. Then you will get a line in the graph that will also be the value if you want to analyse Time over X % in the report.

2.6.3 Column

You can analyze some parameters in relation to other players.

2.6.4 Table

You will here be able to analyze the entire session, not specific parts of the session.



2.7 Import saved data to Excel®

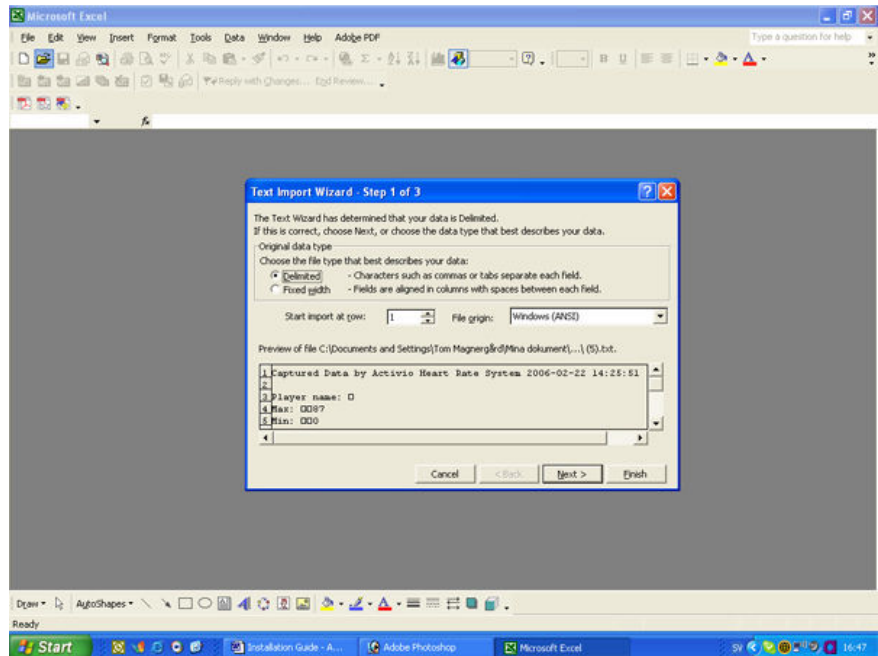
First, open Excel®.

Go to the folder/directory where you saved the text file.

You might not see the text file directly. Chose file format: *View all files*.

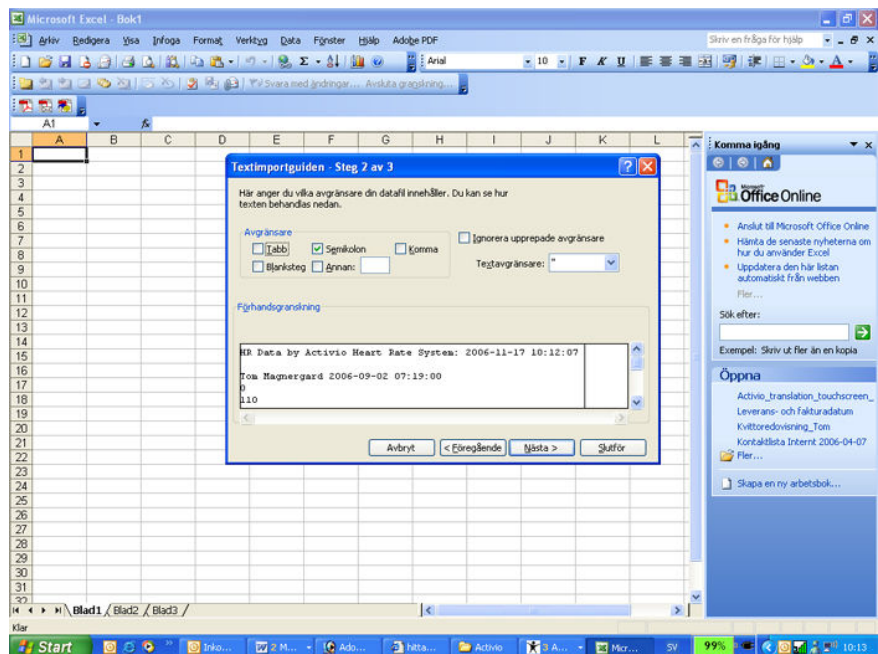
Click on the file you want to import.

Click on 'Next', when the dialouge box are viewed (right)



In the next step you mark 'Semicolon'. Click then on 'Finish'.

You will now have the list of heart beats with every second update in the first column.



3 Maintenance

3.1 Storage

After use, the transmitter will turn off when the chest belt is dry. Therefore it is important that the chest belts are stored in a place where they dry well to save battery.

- After each training session – place the belts outside the carry bag to ensure ventilation. It is recommended to use the hooks (in the package. Placed on the wall) to hang the belts after use. In this position they will dry in the best way.
- If electro gel has been used, make sure to clean the belts directly after the session.
- Never use alcohol or other products than water and soap when cleaning the belts. It might otherwise affect the function of the belt.
- Never put the entire belt under water.

3.2 Battery change

After approx. 2000 hours of use the batteries need to be changed. Note: never change the battery if it's not necessary, because opening the battery sealing might damage the rubber sealing. Important that the rubber sealing is in the right position to ensure the belt to resist humidity.

NOTE!

For the warranty to be valid, batteries have to be changed by a service person, authorized by Activio.

4 Technical specifications

Chest belt transmission range:	Up to 300 m with the belt towards the receiver, depending on the body composition and surrounding area. Range decrease when the players' back is towards the receiver, depending on the body composition and surrounding area.
Material:	Plastic, ABS Nylon, ABS, latex (straps)
Battery:	Lithium, type: CR 2032
Battery life:	Up to approx. 1000 hours
Radio frequency:	868 MHz EU (CE certified) / 915 MHz US (FCC)
Measurements:	30 – 235 beats/min (+/- 1bpm)
Updates:	Every 1 second
Temperature when stored:	0°C to 60 °C

The chest belts delivered must not be used under water. When changing battery (after approx 2000 hours), make sure the rubber sealing remains in the right position.

The receiver is water protected but must not be submerged under water.

4.1 Computer requirements:

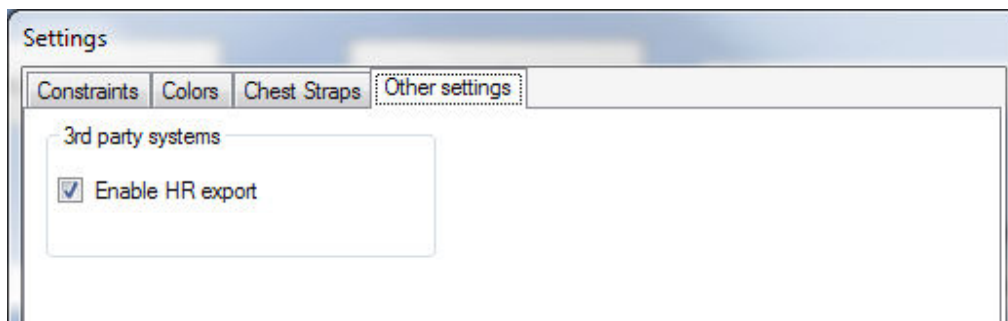
Windows operating system:	XP with Service Pack 3, Windows Vista, Windows 7, 32-/64-bit.
Minimum:	1,6 GHz Intel Atom or similar, 1 Gb RAM, 200 Mb hard drive space.
Recommended:	Intel Core i3 or above, 3 Gb RAM, 5 Gb hard drive space

Exhibit 1 – Real-time export of HR data

Real-time export of HR data is only available in some distributions regarding to license agreement between Activio AB and the customer. The export is accomplished by a CSV text file that is stored on the hard drive every 1 second. This allows 3rd party software to read this text file for import of HR data. The HR data is not filtered by other means than the chest belt built-in filtering against signal artefacts.

Enable/Disable

The export is not enabled as default. The setting is configured in the menu “Tools” → “Settings” → “Other settings”. Check the checkbox “Enable HR export” to activate.



Export format

The exported CSV text file is stored at “**C:\TempActivio\hrdata.txt**” and is updated once every second. The data format is human readable as:

```
5:140;106;158;66;167;71;169;128;<...>;EOL
```

```
<Counter>:<HR data user 1>;<HR data user 2>;<...>;<HR data user NN>;EOL
```

<Counter> followed by colon (“:”) is a cyclic counter from 1 to 59 and then starts over from 1 again. It’s updated every time new data is written to the file.

<HR data user NN> separated by semi-colon (“;”) is the HR value in bpm for user NN. A user that doesn’t produce any data is set to 0.

EOL is the “End Of Line”.

Number of HR values is dependent on the maximum available users in the system as seen on the Player tab in the software.